

Carmichael Coal Mine Project

Groundwater Quality data

March 2025

Sample Type:		REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG
Sample Date:		07/03/2025	07/03/2025	07/03/2025	07/03/2025	07/03/2025	07/03/2025	07/03/2025	07/03/2025	07/03/2025	07/03/2025	07/03/2025	07/03/2025	07/03/2025	07/03/2025
Client sample ID (1st):		C006P3R	C014P2	C027P2	C029SP	C19001SP	C19008SP	C19011SP	C9845SPR	DUPLICATE H	TRIP BLANK D	C007P2	C008P1	C022P1	C025P2
Hydro-stratigraphic unit:		Colinlea Sandstone	Bandanna Formation	Dunda Beds	Alluvium	Tertiary	Alluvium	Rewan Formation	Dunda Beds	Tertiary		Bandanna Formation	Rewan Formation	Dunda Beds	Tertiary
Analyte grouping/Analyte	Unit														
pH Value	pH Unit	8.06	8.18	6.59	7.79	7.25	7.43	8.14	8.31	6.77	8.33	----	7.44	6.99	7.23
Electrical Conductivity @ 25°C	µS/cm	1410	2040	325	29500	16600	28500	987	806	2020	806	----	16700	22800	14600
Total Dissolved Solids @180°C	mg/L	648	972	516	18000	9830	17400	476	362	974	388	----	11400	16800	8850
Total Alkalinity as CaCO3	mg/L	348	305	36	1870	302	813	159	148	255	147	----	251	298	367
Sulfate as SO4 - Turbidimetric	mg/L	4	<1	7	980	396	939	<1	<1	51	<1	----	387	204	378
Chloride	mg/L	247	474	72	8820	5470	9040	227	174	570	169	----	5780	8020	4840
Calcium	mg/L	17	18	3	33	120	262	6	3	4	3	----	368	505	122
Magnesium	mg/L	9	4	3	272	184	369	<1	<1	16	<1	----	339	418	120
Sodium	mg/L	284	398	53	6900	3090	5940	200	165	380	168	----	2800	4130	2990
Potassium	mg/L	5	7	4	200	77	102	5	4	8	4	----	45	90	58
Aluminium	mg/L	<0.01	0.01	0.33	<0.05	<0.01	<0.05	0.02	<0.01	<0.01	<0.01	----	<0.01	<0.01	<0.01
Arsenic	mg/L	<0.001	<0.001	0.005	<0.005	0.006	0.007	0.002	<0.001	<0.001	<0.001	----	<0.001	<0.001	<0.001
Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	----	<0.0001	<0.0001	<0.0001
Chromium	mg/L	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	----	<0.001	<0.001	<0.001
Cobalt	mg/L	<0.001	<0.001	0.002	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	----	<0.001	0.004	0.016
Copper	mg/L	<0.001	<0.001	0.006	<0.005	0.005	0.006	<0.001	<0.001	<0.001	<0.001	----	<0.001	0.380	<0.001
Lead	mg/L	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	----	<0.001	<0.001	<0.001
Manganese	mg/L	0.026	0.008	0.078	0.058	0.209	0.128	0.021	0.040	0.012	0.040	----	0.275	2.00	1.42
Molybdenum	mg/L	<0.001	0.003	<0.001	<0.005	<0.001	<0.005	0.004	0.002	<0.001	0.001	----	<0.001	<0.001	<0.001
Nickel	mg/L	<0.001	<0.001	0.003	<0.005	<0.001	<0.005	<0.001	<0.001	0.001	<0.001	----	<0.001	0.020	0.001
Selenium	mg/L	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	----	<0.01	<0.01	<0.01
Silver	mg/L	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	----	<0.001	<0.001	<0.001
Uranium	mg/L	<0.001	<0.001	<0.001	0.058	<0.001	0.084	<0.001	<0.001	<0.001	<0.001	----	<0.001	0.011	<0.001
Vanadium	mg/L	<0.01	<0.01	0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	----	<0.01	<0.01	<0.01
Zinc	mg/L	<0.005	<0.005	0.023	<0.025	0.016	<0.025	<0.005	<0.005	0.037	<0.005	----	0.018	0.063	<0.005
Boron	mg/L	0.14	0.34	0.12	4.72	1.43	2.48	0.06	<0.05	0.26	0.05	----	0.76	1.57	1.52
Iron	mg/L	<0.05	0.13	2.17	0.65	0.34	<0.05	<0.05	<0.05	<0.05	<0.05	----	1.52	0.68	3.60
Mercury	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	----	<0.0001	<0.0001	<0.0001
Fluoride	mg/L	1.7	1.0	0.2	1.1	0.5	0.4	0.2	0.4	0.2	0.4	----	0.6	0.6	0.5
Ammonia as N	mg/L	0.25	0.86	0.06	0.04	0.10	0.02	0.27	0.17	<0.01	0.19	----	0.65	0.32	0.22
Nitrite as N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	----	<0.01	<0.01	<0.01
Nitrate as N	mg/L	<0.01	<0.01	<0.01	0.01	<0.01	0.04	<0.01	0.02	<0.01	<0.01	----	<0.01	0.07	<0.01
Total Phosphorus as P	mg/L	0.01	0.02	0.17	1.09	0.20	0.06	0.02	<0.01	0.02	<0.01	----	<0.05	<0.05	0.12
Sulfide as S2-	mg/L	<0.10	0.31	<0.10	0.21	1.80	<0.10	<0.10	<0.10	<0.10	<0.10	----	<0.10	<0.10	0.22
C6 - C9 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C6 - C10 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
>C10 - C40 Fraction (sum)	µg/L	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	----	<100	<100	<100
Sum of BTEX	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Sample Type:		REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG
Sample Date:		04/03/2025	04/03/2025	04/03/2025	03/03/2025	04/03/2025	04/03/2025	04/03/2025	04/03/2025	04/03/2025	04/03/2025	04/03/2025	04/03/2025	04/03/2025	04/03/2025
Client sample ID (1st):		C14011SP	C14012SP	C14013SP	C14028SP	C18001SP	C18002SP	C18003SP	C18009SP	C18010SP	C18011SP	C18012SP	C18013SP	C18014SP	C19007SP
Hydro-stratigraphic unit:		Clematis Sandstone	Clematis Sandstone	Clematis Sandstone	Alluvium	Clematis Sandstone	Clematis Sandstone	Moolayember	Weathered Tertiary	Spring Discharge Clematis SSt	Spring Discharge Clematis SSt	Spring Discharge Clematis SSt	Spring Discharge Clematis SSt	Spring Discharge Clematis SSt	Dunda Beds
Analyte grouping/Analyte		Unit													
pH Value	pH Unit	6.68	7.39	5.73	7.01	7.27	7.98	7.33	7.55	9.24	7.70	7.77	7.54	7.42	8.22
Electrical Conductivity @ 25°C	µS/cm	362	503	422	46600	688	392	448	25600	659	641	395	420	545	894
Total Dissolved Solids @180°C	mg/L	194	274	230	33400	359	215	258	23200	367	353	227	288	306	482
Total Alkalinity as CaCO3	mg/L	62	124	11	316	101	133	140	129	213	117	138	145	82	149
Sulfate as SO4 - Turbidimetric	mg/L	5	5	11	1980	10	<1	8	748	<1	4	2	<1	6	10
Chloride	mg/L	60	66	109	16500	143	30	36	9110	57	114	29	27	110	179
Calcium	mg/L	22	3	2	745	4	2	3	1480	8	2	1	1	6	4
Magnesium	mg/L	6	2	10	970	1	<1	2	583	2	<1	<1	<1	19	<1
Sodium	mg/L	36	102	56	7770	128	80	84	3420	137	126	81	83	69	180
Potassium	mg/L	3	8	7	125	18	13	15	21	17	13	13	14	14	5
Aluminium	mg/L	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	3.38	<0.01
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.005	0.002	<0.001	0.002	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	0.008	<0.001	<0.001	<0.001	<0.001	0.002	<0.001
Cobalt	mg/L	<0.001	<0.001	0.004	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	mg/L	<0.001	<0.001	0.007	<0.005	<0.001	<0.001	<0.001	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	mg/L	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	mg/L	0.009	0.002	0.019	1.79	0.014	0.131	0.439	<0.001	0.029	0.003	0.010	0.013	0.004	0.041
Molybdenum	mg/L	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	0.013	0.002	<0.001	0.001	<0.001	0.001	<0.001
Nickel	mg/L	0.003	<0.001	0.009	<0.005	0.001	<0.001	<0.001	0.049	0.003	<0.001	<0.001	<0.001	0.016	<0.001
Selenium	mg/L	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Uranium	mg/L	<0.001	<0.001	<0.001	0.053	<0.001	<0.001	<0.001	0.035	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	mg/L	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	mg/L	0.022	<0.005	0.038	<0.025	0.079	<0.005	0.010	0.018	0.037	<0.005	<0.005	<0.005	0.882	<0.005
Boron	mg/L	0.13	0.13	0.14	2.11	0.16	0.08	0.12	1.47	0.14	0.14	0.10	0.11	0.10	0.07
Iron	mg/L	<0.05	<0.05	<0.05	0.90	1.69	<0.05	0.47	<0.05	1.89	0.08	<0.05	0.22	1.43	<0.05
Mercury	mg/L	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoride	mg/L	<0.1	0.5	<0.1	0.3	0.2	0.4	0.6	0.8	0.3	0.2	0.5	0.6	<0.1	0.4
Ammonia as N	mg/L	0.02	0.04	0.08	0.12	0.22	0.12	0.75	0.04	0.05	0.17	0.11	0.16	0.03	0.24
Nitrite as N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.40	0.02	0.64	<0.01	<0.01	<0.01	<0.01	0.32	0.10	<0.01	0.01	0.02	0.16	0.01
Total Phosphorus as P	mg/L	<0.01	0.06	<0.01	<0.05	0.03	0.20	0.06	<0.05	0.11	0.54	0.09	0.15	0.12	0.01
Sulfide as S2-	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.64
C6 - C9 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C6 - C10 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
>C10 - C40 Fraction (sum)	µg/L	<100	<100	<100	<100	<100	<100	<100	<100	<100	360	<100	<100	<100	<100
Sum of BTEX	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Sample Type:		REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG
Sample Date:		04/03/2025	04/03/2025	03/03/2025	04/03/2025	04/03/2025	04/03/2025	04/03/2025	04/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025
Client sample ID (1st):		C19015SP	C19027SP	C914001SPR	C919016SPR	HD02	HD03A	HD03B	Joshua Spring	DUPLICATE A	DUPLICATE B	DUPLICATE C	FIELD BLANK 1	TRIP BLANK A	C027P1
Hydro-stratigraphic unit:		Dunda Beds	Bandanna Formation	Joe Joe Group	Rewan Formation	Clematis Sandstone	Clematis Sandstone	Alluvium	Spring Discharge Clematis Sst						
Analyte grouping/Analyte	Unit														
pH Value	pH Unit	8.09	11.1	6.84	8.53	6.96	7.73	7.64	7.59	8.03	7.36	8.26	5.84	----	6.40
Electrical Conductivity @ 25°C	µS/cm	727	2170	21700	788	123	732	779	563	390	686	675	<1	----	112
Total Dissolved Solids @180°C	mg/L	391	926	15900	424	141	391	415	298	243	380	370	<10	----	148
Total Alkalinity as CaCO3	mg/L	139	177	238	193	50	112	120	120	129	101	142	4	----	16
Sulfate as SO4 - Turbidimetric	mg/L	<1	20	1300	3	3	12	8	7	<1	9	<1	<1	----	7
Chloride	mg/L	136	477	7350	121	6	146	158	86	28	140	118	<1	----	16
Calcium	mg/L	2	14	818	4	7	4	3	12	2	3	2	<1	----	3
Magnesium	mg/L	<1	<1	425	<1	4	2	2	3	<1	1	<1	<1	----	2
Sodium	mg/L	149	366	3520	165	8	135	149	87	79	127	137	<1	----	11
Potassium	mg/L	5	9	68	3	5	16	17	22	13	18	9	<1	----	4
Aluminium	mg/L	<0.01	0.05	<0.01	<0.01	0.56	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	----	0.82
Arsenic	mg/L	<0.001	0.001	<0.001	0.001	0.006	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	----	<0.001
Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	----	<0.0001
Chromium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----	<0.001
Cobalt	mg/L	<0.001	<0.001	<0.001	<0.001	0.011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----	0.003
Copper	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----	0.012
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----	<0.001
Manganese	mg/L	0.039	<0.001	0.894	0.017	0.716	0.401	0.335	0.125	0.128	0.013	0.009	<0.001	----	0.169
Molybdenum	mg/L	<0.001	0.008	<0.001	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----	<0.001
Nickel	mg/L	<0.001	<0.001	0.002	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	----	0.002
Selenium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	----	<0.01
Silver	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----	<0.001
Uranium	mg/L	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----	<0.001
Vanadium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	----	<0.01
Zinc	mg/L	<0.005	<0.005	0.101	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	0.079	<0.005	<0.005	----	<0.005
Boron	mg/L	0.11	0.41	1.88	0.08	0.06	0.15	0.17	0.10	0.08	0.14	0.10	<0.05	----	<0.05
Iron	mg/L	<0.05	<0.05	2.90	<0.05	2.54	0.66	0.91	<0.05	<0.05	1.68	0.07	<0.05	----	1.34
Mercury	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	----	<0.0001
Fluoride	mg/L	0.4	0.4	0.3	0.3	<0.1	0.2	0.3	0.4	0.3	0.2	0.3	<0.1	----	<0.1
Ammonia as N	mg/L	0.16	1.69	0.22	0.39	0.30	0.26	0.20	0.08	0.15	0.21	0.22	0.02	----	0.13
Nitrite as N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	----	<0.01
Nitrate as N	mg/L	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	----	0.02
Total Phosphorus as P	mg/L	0.02	<0.01	<0.05	<0.01	0.07	0.09	0.18	<0.01	0.18	0.03	0.22	<0.01	----	0.06
Sulfide as S2-	mg/L	<0.10	1.76	<0.10	0.31	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	----	0.1
C6 - C9 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C6 - C10 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
>C10 - C40 Fraction (sum)	µg/L	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	----	<100
Sum of BTEX	µg/L	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Sample Type:	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG
Sample Date:	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025
Client sample ID (1st):	C034P3	C035P1	C035P2	C14006SP	C14008SP	C14021SP	C14023SP	C14027SP	C14029SP	C180117SP	C556P1	C833SP	C847SP	C848SP	C914030SPR
Hydro-stratigraphic unit:	Colinlea Sandstone	Rewan Formation	Bandanna Formation	Joe Joe Group	Joe Joe Group	Clematis Sandstone	Dunda Beds	Alluvium	Composite Bore (Tertiary / Joe Joe)	Dunda Beds	Rewan Formation	Colinlea Sandstone	Bandanna Formation	Colinlea Sandstone	Joe Joe Group
Analyte grouping/Analyte	Unit														
pH Value	pH Unit	6.77	7.06	6.92	6.88	6.39	6.32	7.99	6.87	6.50	6.30	6.17	7.99	6.08	6.92
Electrical Conductivity @ 25°C	µS/cm	1990	3810	1560	8800	678	620	765	51500	10100	227	243	1050	362	2990
Total Dissolved Solids @180°C	mg/L	942	1810	734	5160	348	319	374	41200	6720	127	134	518	217	1520
Total Alkalinity as CaCO3	mg/L	99	143	103	110	34	38	128	183	53	35	25	200	23	203
Sulfate as SO4 - Turbidimetric	mg/L	35	52	20	218	14	21	2	2430	479	8	10	<1	8	20
Chloride	mg/L	544	1060	415	2910	185	151	153	20000	3450	36	45	204	84	829
Calcium	mg/L	27	16	12	186	8	6	4	786	202	1	<1	10	1	27
Magnesium	mg/L	12	15	8	86	6	12	1	1230	154	2	2	3	2	24
Sodium	mg/L	338	725	284	1470	107	86	148	9730	1730	43	45	191	64	528
Potassium	mg/L	11	5	6	21	5	16	7	114	10	2	2	25	2	15
Aluminium	mg/L	<0.01	0.01	0.01	<0.01	0.01	0.01	0.01	<0.05	0.01	0.05	0.05	0.02	0.01	0.01
Arsenic	mg/L	<0.001	0.002	<0.001	0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/L	<0.001	<0.001	<0.001	<0.001	0.006	<0.001	<0.001	0.013	0.004	<0.001	0.002	<0.001	<0.001	0.007
Copper	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.005	<0.001	0.004	0.002	<0.001	0.006	<0.001
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	mg/L	0.220	0.109	0.101	0.391	0.084	0.002	0.053	1.35	0.057	0.010	0.033	0.060	0.001	0.283
Molybdenum	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	0.003	<0.001	<0.001
Nickel	mg/L	<0.001	<0.001	<0.001	<0.001	0.008	<0.001	<0.001	0.015	0.009	0.001	0.001	<0.001	<0.001	0.011
Selenium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	<0.001	<0.001	<0.001	0.008	<0.001	<0.001	<0.001	0.007	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Uranium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	mg/L	0.121	0.024	0.014	0.007	0.021	0.013	<0.005	0.045	0.013	0.040	0.015	0.009	0.031	0.022
Boron	mg/L	0.23	0.67	0.25	0.44	0.10	0.13	0.07	2.89	1.56	0.07	0.11	0.17	0.11	0.18
Iron	mg/L	1.95	0.20	0.34	6.36	1.89	<0.05	<0.05	2.99	1.24	1.41	0.80	0.23	<0.05	1.22
Mercury	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoride	mg/L	0.2	0.6	0.2	0.7	0.2	<0.1	0.4	0.2	<0.1	0.2	0.2	1.3	0.1	0.3
Ammonia as N	mg/L	0.12	0.11	0.06	0.60	0.09	0.04	0.17	0.16	0.08	0.15	0.03	0.33	0.05	0.04
Nitrite as N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	<0.01	<0.01	0.01	<0.01	<0.01	0.12	<0.01	0.02	<0.01	<0.01	0.01	<0.01	0.12	<0.01
Total Phosphorus as P	mg/L	<0.01	0.09	0.03	0.01	<0.01	<0.01	0.03	0.24	0.08	0.01	0.02	0.01	0.05	0.05
Sulfide as S2-	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.6	0.1	<0.1
C6 - C9 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C6 - C10 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
>C10 - C40 Fraction (sum)	µg/L	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sum of BTEX	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1

Sample Type:		REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG
Sample Date:		05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025
Client sample ID (1st):		C9838SPR	DUPLICATE D	DUPLICATE E	TRIP BLANK B	C19029SP	C011P3	C012P1	C012P2	C018P2	C018P3	C024P3	C14003SP	C14020SP	C14003SP
Hydro-stratigraphic unit:		Rewan Formation				Colinlea Sandstone	Colinlea Sandstone	Joe Joe Group	Joe Joe Group	Bandanna Formation	Colinlea Sandstone	Colinlea Sandstone	Joe Joe Group	Moolayember	Clematis Sandstone
Weathered Tertiary															
Analyte grouping/Analyte	Unit														
pH Value	pH Unit	5.84	6.25	8.08	----	7.70	7.73	6.48	7.54	7.52	7.28	6.57	5.87	6.32	5.63
Electrical Conductivity @ 25°C	µS/cm	415	362	768	----	1000	955	2100	2720	2100	1030	1470	52300	1570	389
Total Dissolved Solids @180°C	mg/L	241	227	370	----	568	432	1160	1360	992	516	756	47400	866	226
Total Alkalinity as CaCO3	mg/L	16	22	131	----	310	206	75	254	237	163	100	48	38	13
Sulfate as SO4 - Turbidimetric	mg/L	7	8	2	----	<1	<1	49	47	12	17	33	2670	55	4
Chloride	mg/L	107	83	151	----	108	170	584	674	515	208	397	20600	451	98
Calcium	mg/L	2	1	4	----	6	27	32	95	59	28	15	2540	8	2
Magnesium	mg/L	6	2	1	----	4	5	33	32	33	6	28	1460	47	10
Sodium	mg/L	63	63	147	----	215	175	323	441	316	182	242	8600	230	49
Potassium	mg/L	3	2	7	----	7	9	11	15	18	10	10	31	26	10
Aluminium	mg/L	0.01	0.01	0.01	----	<0.01	0.01	0.01	0.01	<0.01	0.01	<0.01	0.06	<0.01	0.01
Arsenic	mg/L	<0.001	<0.001	<0.001	----	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	0.003	<0.005	<0.001	<0.001
Cadmium	mg/L	<0.0001	<0.0001	<0.0001	----	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001
Chromium	mg/L	<0.001	<0.001	<0.001	----	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001
Cobalt	mg/L	<0.001	<0.001	<0.001	----	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.027	0.001	0.002
Copper	mg/L	0.013	0.005	<0.001	----	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001
Lead	mg/L	<0.001	<0.001	<0.001	----	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001
Manganese	mg/L	0.002	0.001	0.053	----	0.016	0.032	0.018	0.160	0.073	0.051	0.167	2.66	0.002	0.004
Molybdenum	mg/L	<0.001	<0.001	<0.001	----	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001
Nickel	mg/L	0.002	<0.001	<0.001	----	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.006	0.034	0.007	0.002
Selenium	mg/L	<0.1	<0.1	<0.1	----	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
Silver	mg/L	<0.001	<0.001	<0.001	----	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.006	<0.001	<0.001
Uranium	mg/L	<0.001	<0.001	<0.001	----	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001
Vanadium	mg/L	<0.01	<0.01	<0.01	----	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01
Zinc	mg/L	0.015	0.030	<0.005	----	<0.005	0.007	0.076	0.015	<0.005	<0.005	0.073	0.090	0.026	0.024
Boron	mg/L	0.11	0.11	0.07	----	0.30	0.44	0.41	0.50	0.58	0.36	0.33	3.11	0.35	0.08
Iron	mg/L	<0.05	<0.05	<0.05	----	0.26	0.40	0.05	0.32	0.35	0.75	8.64	21.8	0.10	<0.05
Mercury	mg/L	<0.0001	<0.0001	<0.0001	----	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoride	mg/L	<0.1	0.1	0.4	----	5.8	1.0	0.2	0.3	0.4	1.0	0.4	0.1	0.2	<0.1
Ammonia as N	mg/L	0.08	0.02	0.25	----	0.18	0.18	0.03	0.04	0.03	0.10	0.16	0.64	<0.01	<0.01
Nitrite as N	mg/L	<0.01	<0.01	<0.01	----	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.19	0.12	<0.01	----	<0.01	<0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.53
Total Phosphorus as P	mg/L	0.15	0.02	0.03	----	0.07	0.01	0.04	<0.01	0.10	0.02	0.07	<0.05	<0.01	<0.01
Sulfide as S2-	mg/L	<0.1	<0.1	0.1	----	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
C6 - C9 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C6 - C10 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
>C10 - C40 Fraction (sum)	µg/L	<100	<100	<100	----	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sum of BTEX	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Sample Type:		REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG
Sample Date:		06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025	06/03/2025
Client sample ID (1st):		C18006SP	C18006SP	C19002SP	C19010SP	C19022SP	C19012SP	C555P1	C9553P1R	C975SP	DUPLICATE F	DUPLICATE G	FIELD BLANK 2	TRIP BLANK C		
Hydro-stratigraphic unit:		Weathered Tertiary	Weathered Tertiary	Clematis Sandstone	Clematis Sandstone	Rewan Formation	Weathered Tertiary	Rewan Formation	Rewan Formation	Colinlea Sandstone						
Analyte grouping/Analyte	Unit															
pH Value	pH Unit	6.77	6.80	6.20	7.98	11.5	6.82	7.30	6.42	6.41	7.32	7.47	5.88	----		
Electrical Conductivity @ 25°C	µS/cm	53600	62100	342	634	2910	51300	825	381	620	825	2090	<1	----		
Total Dissolved Solids @180°C	mg/L	49600	53500	200	316	1380	50200	392	234	310	384	992	<10	----		
Total Alkalinity as CaCO3	mg/L	165	201	27	146	342	232	123	49	40	124	246	4	----		
Sulfate as SO4 - Turbidimetric	mg/L	2510	3040	9	<1	94	2570	<1	11	26	<1	12	<1	----		
Chloride	mg/L	20200	23900	89	99	486	18500	186	74	149	174	511	<1	----		
Calcium	mg/L	2540	1990	9	2	39	2510	8	1	3	7	60	<1	----		
Magnesium	mg/L	1250	1250	5	<1	<1	1290	8	6	7	8	34	<1	----		
Sodium	mg/L	9000	9850	42	148	482	8110	165	69	115	158	328	<1	----		
Potassium	mg/L	17	29	4	7	22	28	8	3	6	8	19	<1	----		
Aluminium	mg/L	<0.05	<0.05	0.04	0.01	0.64	<0.05	0.02	0.02	<0.01	0.03	<0.01	<0.01	----		
Arsenic	mg/L	0.007	<0.005	<0.001	<0.001	0.030	0.014	0.002	0.002	<0.001	0.002	<0.001	<0.001	----		
Cadmium	mg/L	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	----		
Chromium	mg/L	0.074	<0.005	0.002	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----		
Cobalt	mg/L	0.015	<0.005	<0.001	<0.001	<0.001	<0.005	0.001	<0.001	<0.001	0.001	<0.001	<0.001	----		
Copper	mg/L	<0.005	<0.005	0.009	<0.001	<0.001	<0.005	0.001	0.005	0.002	0.001	<0.001	<0.001	----		
Lead	mg/L	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----		
Manganese	mg/L	2.40	1.06	0.006	0.004	<0.001	2.70	0.149	0.079	0.042	0.150	0.073	<0.001	----		
Molybdenum	mg/L	0.007	0.063	0.001	<0.001	0.070	0.010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----		
Nickel	mg/L	0.220	0.234	0.001	<0.001	0.002	<0.005	0.001	0.001	<0.001	<0.001	<0.001	<0.001	----		
Selenium	mg/L	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	----		
Silver	mg/L	0.006	0.006	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----		
Uranium	mg/L	0.054	0.048	<0.001	<0.001	<0.001	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	----		
Vanadium	mg/L	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	----		
Zinc	mg/L	<0.025	<0.025	0.024	<0.005	<0.005	0.061	0.011	0.050	0.084	0.011	<0.005	<0.005	----		
Boron	mg/L	4.97	4.96	0.12	0.10	0.14	3.86	0.29	0.14	0.18	0.28	0.60	<0.05	----		
Iron	mg/L	1.77	<0.25	<0.05	0.06	<0.05	12.6	1.42	1.29	0.06	1.43	0.32	<0.05	----		
Mercury	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	0.0009	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	----		
Fluoride	mg/L	<0.1	0.2	<0.1	0.3	0.8	0.3	0.5	0.2	0.2	0.5	0.4	<0.1	----		
Ammonia as N	mg/L	0.25	0.58	0.10	0.15	7.62	0.13	0.15	0.17	0.16	0.07	0.04	<0.01	----		
Nitrite as N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	----		
Nitrate as N	mg/L	<0.01	0.07	0.21	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	<0.01	----		
Total Phosphorus as P	mg/L	0.17	<0.05	<0.01	0.18	0.01	0.05	0.07	0.07	0.02	0.06	0.11	<0.01	----		
Sulfide as S2-	mg/L	<0.1	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	----		
C6 - C9 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C6 - C10 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
>C10 - C40 Fraction (sum)	µg/L	<100	<100	<100	<100	190	<100	<100	<100	<100	<100	<100	<100	----		
Sum of BTEX	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1